

## RAW SEQUENCE LISTING

PATENT APPLICATION: US/09/674,292

DATE: 09/05/2001

TIME: 15:00:43

Input Set : A:\Hu22nat1.app  
Output Set: N:\CRF3\09052001\I674292.raw

3 <110> APPLICANT: McMahon, Andrew P  
4 Lee, Scott K  
5 Takeda, Shinji  
7 <120> TITLE OF INVENTION: Induction of Neuronal Regeneration  
9 <130> FILE REFERENCE: 21508-022-NATL  
11 <140> CURRENT APPLICATION NUMBER: 09/674,292  
12 <141> CURRENT FILING DATE: 1998-04-30  
14 <150> PRIOR APPLICATION NUMBER: PCT/US 98/08716  
15 <151> PRIOR FILING DATE: 1998-04-30  
17 <160> NUMBER OF SEQ ID NOS: 11  
19 <170> SOFTWARE: PatentIn Ver. 2.1  
21 <210> SEQ ID NO: 1  
22 <211> LENGTH: 370  
23 <212> TYPE: PRT  
24 <213> ORGANISM: Homo sapiens  
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30 Leu Ala Leu Ala Ala Leu Pro Ala Ala Leu Ala Ala Asn Ser Ser Gly  
31 20 25 30  
33 Arg Trp Trp Gly Ile Val Asn Val Ala Ser Ser Thr Asn Leu Leu Thr  
34 35 40 45  
36 Asp Ser Lys Ser Leu Gln Leu Val Leu Glu Pro Ser Leu Gln Leu Leu  
37 50 55 60  
39 Ser Arg Lys Gln Arg Arg Leu Ile Arg Gln Asn Pro Gly Ile Leu His  
40 65 70 75 80  
42 Ser Val Ser Gly Gly Leu Gln Ser Ala Val Arg Glu Cys Lys Trp Gln  
43 85 90 95  
45 Phe Arg Asn Arg Arg Trp Asn Cys Pro Thr Ala Pro Gly Pro His Leu  
46 100 105 110  
48 Phe Gly Lys Ile Val Asn Arg Gly Cys Arg Glu Thr Ala Phe Ile Phe  
49 115 120 125  
51 Ala Ile Thr Ser Ala Gly Val Thr His Ser Val Ala Arg Ser Cys Ser  
52 130 135 140  
54 Glu Gly Ser Ile Glu Ser Cys Thr Cys Asp Tyr Arg Arg Arg Gly Pro  
55 145 150 155 160  
57 Gly Gly Pro Asp Trp His Trp Gly Gly Cys Ser Asp Asn Ile Asp Phe  
58 165 170 175  
60 Gly Arg Leu Phe Gly Arg Glu Phe Val Asp Ser Gly Glu Lys Gly Arg  
61 180 185 190  
63 Asp Leu Arg Phe Leu Met Asn Leu His Asn Asn Glu Ala Gly Arg Thr  
64 190 200 205  
66 Thr Val Phe Ser Ile Met Arg Thr Glu Val Asn His Asp Met Phe  
67 210 215 220  
69 Gly Ser Cys Thr Val Arg Thr Cys Trp Met Arg Leu Pro Thr Leu Arg  
70 225 230 235 240  
72 Ala Val Gly Asp Val Leu Arg Asp Arg Phe Arg Gly Ala Ser Arg Val

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73 245 250 255  
 75 Leu Tyr Gly Asn Arg Gly Ser Asn Arg Ala Ser Arg Ala Glu Leu Leu  
 76 260 265 270  
 78 Arg Leu Glu Pro Glu Asp Pro Ala His Lys Pro Pro Ser Pro His Asp  
 79 275 280 285  
 81 Leu Val Tyr Phe Glu Lys Ser Pro Asn Phe Cys Thr Tyr Ser Gly Arg  
 82 290 295 300  
 84 Leu Gly Thr Ala Gly Thr Ala Gly Arg Ala Cys Asn Ser Ser Ser Pro  
 85 305 310 315 320  
 87 Ala Leu Asp Gly Cys Glu Leu Leu Cys Cys Gly Arg Gly His Arg Thr  
 88 325 330 335  
 90 Arg Thr Gln Arg Val Thr Glu Arg Cys Asn Cys Thr Phe His Trp Cys  
 91 340 345 350  
 93 Cys His Val Ser Cys Arg Asn Cys Thr His Thr Arg Val Leu His Glu  
 94 355 360 365  
 96 Cys Leu  
 97 370  
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 101 <211> LENGTH: 360  
 102 <212> TYPE: PRT  
 103 <213> ORGANISM: Homo sapiens  
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 109 Thr Trp Leu Thr Pro Glu Val Asn Ser Ser Trp Trp Tyr Met Arg Ala  
 110 20 25 30  
 112 Thr Gly Gly Ser Ser Arg Val Met Cys Asp Asn Val Pro Gly Leu Val  
 113 35 40 45  
 115 Ser Ser Gln Arg Gln Leu Cys His Arg His Pro Asp Val Met Arg Ala  
 116 50 55 60  
 118 Ile Ser Gln Gly Val Ala Glu Trp Thr Ala Glu Cys Gln His Gln Phe  
 119 65 70 75 80  
 121 Arg Gln His Arg Trp Asn Cys Asn Thr Leu Asp Arg Asp His Ser Leu  
 122 85 90 95  
 124 Phe Gly Arg Val Leu Leu Arg Ser Ser Arg Glu Ser Ala Phe Val Tyr  
 125 100 105 110  
 127 Ala Ile Ser Ser Ala Gly Val Val Phe Ala Ile Thr Arg Ala Cys Ser  
 128 115 120 125  
 130 Gln Gly Glu Val Lys Ser Cys Ser Cys Asp Pro Lys Lys Met Gly Ser  
 131 130 135 140  
 133 Ala Lys Asp Ser Lys Gly Ile Phe Asp Trp Gly Gly Cys Ser Asp Asn  
 134 145 150 155 160  
 136 Ile Asp Tyr Gly Ile Lys Phe Ala Arg Ala Phe Val Asp Ala Lys Glu  
 137 165 170 175  
 139 Arg Lys Gly Lys Asp Ala Arg Ala Leu Met Asn Leu His Asn Asn Arg  
 140 180 185 190  
 142 Ala Gly Arg Lys Ala Val Lys Arg Thr Leu Lys Gln Glu Cys Lys Cys  
 143 190 195  
 145 His Gly Val Ser Gly Ser Cys Thr Leu Arg Thr Cys Trp Leu Ala Met

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146	210	215	220														
148	Ala	Asp	Phe	Arg	Lys	Thr	Gly	Asp	Tyr	Ile	u	Trp	Arg	Lys	Tyr	Asn	Gly
149	225	230	235	240													
151	Ala	Ile	Gln	Val	Val	Met	Asn	Gln	Asp	Gly	Thr	Gly	Phe	Thr	Val	Ala	
152	245	250	255	255													
154	Asn	Glu	Arg	Phe	Lys	Lys	Pro	Thr	Lys	Asn	Asp	Leu	Val	Tyr	Phe	Glu	
155	260	265	270	270													
157	Asn	Ser	Pro	Asp	Tyr	Cys	Ile	Arg	Asp	Arg	Glu	Ala	Gly	Ser	Leu	Gly	
158	275	280	285	285													
160	Thr	Ala	Gly	Arg	Val	Cys	Asn	Leu	Thr	Ter	Arg	Gly	Met	Asp	Ser	Cys	
161	290	295	300	300													
163	Glu	Val	Met	Cys	Cys	Gly	Arg	Gly	Tyr	Asp	Thr	Ser	His	Val	Thr	Arg	
164	305	310	315	320													
166	Met	Thr	Lys	Cys	Gly	Cys	Lys	Phe	His	Trp	Cys	Cys	Ala	Val	Arg	Cys	
167	325	330	335	335													
169	Gln	Asp	Cys	Leu	Glu	Ala	Leu	Asp	Val	His	Thr	Cys	Lys	Ala	Pro	Lys	
170	340	345	350	350													
172	Asn	Ala	Asp	Trp	Thr	Thr	Ala	Thr	355	360	360	360	360	360	360	360	
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183	1	5	10	15	15	15	15	15	15	15	15	15	15	15	15	15	
185	Leu	Gly	Ser	Tyr	Pro	Ile	Trp	Trp	Ser	Leu	Ala	Val	Gly	Pro	Gly	Tyr	
186	20	25	30	30	30	30	30	30	30	30	30	30	30	30	30	30	
188	Ser	Ser	Leu	Ser	Thr	Gln	Pro	Ile	Leu	Cys	Ala	Ser	Ile	Pro	Gly	Leu	
189	35	40	45	45	45	45	45	45	45	45	45	45	45	45	45	45	
191	Val	Pro	Lys	Gly	Leu	Arg	Phe	Cys	Arg	Asn	Tyr	Val	Glu	Ile	Met	Pro	
192	50	55	60	60	60	60	60	60	60	60	60	60	60	60	60	60	
194	Ser	Val	Ala	Glu	Gly	Val	Lys	Ala	Gly	Ile	Gln	Glu	Cys	Gln	His	Gln	
195	65	70	75	80	80	80	80	80	80	80	80	80	80	80	80	80	
197	Phe	Arg	Gly	Arg	Arg	Trp	Asn	Cys	Thr	Thr	Val	Ser	Asn	Ser	Leu	Ala	
198	85	90	95	95	95	95	95	95	95	95	95	95	95	95	95	95	
200	Ile	Phe	Gly	Pro	Val	Leu	Asp	Lys	Ala	Thr	Arg	Glu	Ser	Ala	Phe	Val	
201	100	105	110	110	110	110	110	110	110	110	110	110	110	110	110	110	
203	His	Ala	Ile	Ala	Ser	Ala	Gly	Val	Ala	Phe	Ala	Val	Thr	Arg	Ser	Cys	
204	115	120	125	125	125	125	125	125	125	125	125	125	125	125	125	125	
206	Ala	Glu	Gly	Ser	Ala	Ala	Ile	Cys	Gly	Cys	Ser	Ser	Arg	Leu	Gly	Ala	
207	130	135	140	140	140	140	140	140	140	140	140	140	140	140	140	140	
209	Ser	Pro	Gly	Gly	Gly	Trp	Lys	Trp	Gly	Gly	Cys	Ser	Glu	Asp	Ile	Glu	
210	145	150	155	160	160	160	160	160	160	160	160	160	160	160	160	160	
212	Phe	Gly	Gly	Met	Val	Ser	Arg	Glu	Phe	Ala	Asp	Ala	Arg	Glu	Asn	Arg	
213	165	170	175	175	175	175	175	175	175	175	175	175	175	175	175	175	
215	Pro	Asp	Ala	Arg	Ser	Ala	Met	Asn	Arg	His	Asn	Asn	Glu	Ala	Gly	Arg	
216	170	175	180	180	180	180	180	180	180	180	180	180	180	180	180	180	
218	Gln	Ala	Ile	Ala	Asp	Ser	His	Met	His	Ile							

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219 195 200 205  
221 Ser Gly Ser Cys Glu Val Lys Thr Cys Thr Cys Ser Gln Pro Asp Phe  
222 210 215 220  
224 Arg Thr Ile Gly Asp Phe Leu Lys Asp Lys Tyr Asp Ser Ala Ser Glu  
225 225 230 235 240  
227 Met Val Val Glu Lys His Arg Glu Ser Arg Gly Trp Val Glu Thr Leu  
228 245 250 255  
230 Arg Pro Arg Tyr Thr Tyr Phe Lys Val Pro Thr Glu Arg Asp Leu Val  
231 260 265 270  
233 Tyr Tyr Glu Ala Ser Pro Asn Phe Cys Glu Pro Asn Pro Glu Thr Gly  
234 275 280 285  
236 Ser Phe Gly Thr Arg Asp Arg Thr Cys Asn Val Ser Ser His Gly Ile  
237 290 295 300  
239 Asp Gly Cys Asp Leu Leu Cys Cys Gly Arg Gly His Asn Ala Arg Thr  
240 305 310 315 320  
242 Glu Arg Arg Arg Glu Lys Cys His Cys Val Phe His Trp Cys Cys Tyr  
243 325 330 335  
245 Val Ser Cys Gln Glu Cys Thr Arg Val Tyr Asp Val His Thr Cys Lys  
246 340 345 350  
252 <210> SEQ ID NO: 4  
253 <211> LENGTH: 349  
254 <212> TYPE: PRT  
255 <213> ORGANISM: Homo sapiens  
257 <400> SEQUENCE: 4  
258 Met Asn Arg Lys Ala Leu Arg Cys Leu Gly His Leu Phe Leu Ser Leu  
259 1 5 10 15  
261 Gly Met Val Cys Leu Arg Ile Gly Phe Ser Ser Val Val Ala Leu  
262 20 25 30  
264 Gly Ala Thr Ile Ile Cys Asn Lys Ile Pro Gly Leu Ala Pro Arg Gln  
265 35 40 45  
267 Arg Ala Ile Cys Gln Ser Arg Pro Asp Ala Ile Ile Val Ile Gly Glu  
268 50 55 60  
270 Gly Ser Gln Met Gly Leu Asp Glu Cys Gln Phe Gln Phe Arg Asn Gly  
271 65 70 75 80  
273 Arg Trp Asn Cys Ser Ala Leu Gly Glu Arg Thr Val Phe Gly Lys Glu  
274 85 90 95  
276 Leu Lys Val Gly Ser Arg Asp Gly Ala Phe Thr Tyr Ala Ile Ile Ala  
277 100 105 110  
279 Ala Gly Val Ala His Ala Ile Thr Ala Ala Cys Thr His Gly Asn Leu  
280 115 120 125  
282 Ser Asp Cys Gly Cys Asp Lys Glu Lys Gln Gly Gin Tyr His Arg Asp  
283 130 135 140  
285 Glu Gly Trp Lys Trp Gly Gly Cys Ser Ala Asp Ile Arg Tyr Gly Ile  
286 145 150 155 160  
288 Gly Phe Ala Lys Val Phe Val Asp Ala Arg Glu Ile Lys Gln Asn Ala  
289 165 170 175  
291 Arg Thr Leu Met Asn Ile His Asn Asn Ile Asn Gly Asn Lys Ile Leu  
294 Glu Glu Asn Met Tyr Leu Ile Tyr Tyr Cys His Asn Gln Val Ser Gly Ser

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295	195	200	205
297	Cys Thr Thr Lys Thr Cys Trp Thr Thr Leu Pro Gln Phe Arg Glu Leu	215	220
298	210		
300	Gly Tyr Val Leu Lys Asp Lys Tyr Asn Glu Ala Val His Val Glu Pro	230	235
301	225		240
303	Val Arg Ala Ser Arg Asn Lys Arg Pro Thr Phe Leu Lys Ile Lys Lys	245	250
304	245		255
306	Pro Leu Ser Tyr Arg Lys Pro Met Asp Thr Asp Leu Val Tyr Ile Glu	260	265
307	260		270
309	Lys Ser Pro Asn Tyr Cys Glu Glu Asp Pro Val Thr Gly Ser Val Gly	275	285
310	275		
312	Thr Gln Gly Arg Ala Cys Asn Lys Thr Ala Pro Gin Ala Ser Gly Cys	280	
313	290	295	300
315	Asp Leu Met Cys Cys Gly Arg Gly Tyr Asn Thr His Gin Tyr Ala Arg	310	315
316	305		320
318	Val Trp Gln Cys Asn Cys Lys Phe His Trp Cys Cys Tyr Val Lys Cys	325	330
319	325		335
321	Asn Thr Cys Ser Glu Arg Thr Glu Met Tyr Thr Cys Lys	340	
322	340	345	
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328	<213> ORGANISM: Homo sapiens		
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335			30
337	Val Gln Val Glu Val Val Arg Ala Ser Arg Leu Arg Gln Pro Thr Phe	35	40
338			45
340	Leu Arg Ile Lys Gln Leu Arg Ser Tyr Gln Lys Pro Met Glu Thr Asp	50	55
341			60
343	Leu Val Tyr Ile Glu Lys Ser Pro Asn Tyr Cys Glu Glu Asp Ala Ala	65	70
344		75	80
346	Thr Gly Ser Val Gly Thr Gln Gly Arg Ile Cys Asn Arg Thr Ser Pro	85	90
347			95
349	Gly Ala Asp Gly Cys Asp Thr Met Cys Cys Gly Arg Gly Tyr Asn Thr	100	105
350			110
352	His Gln Tyr Thr Lys Val Trp Gln Cys Asn Cys Lys	115	120
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357	<211> LENGTH: 365		
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365	Ile Phe Phe Ser Ser Ala Gln Val Val Ile Ile Ala Asn Met Trp Trp	20	25
366			30

**VERIFICATION SUMMARY**  
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